

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No: 50-346
License No: NPF-3

Report No: 50-346/98014(DRP)

Licensee: Toledo Edison Company

Facility: Davis-Besse Nuclear Power Station

Location: 5501 N. State Route 2
Oak Harbor, OH 43449

Dates: August 8 - September 18, 1998

Inspectors: S. Campbell, Senior Resident Inspector
K. Zellers, Resident Inspector

Approved by: Thomas J. Kozak, Chief
Reactor Projects Branch 4

EXECUTIVE SUMMARY

Davis-Besse Nuclear Power Station NRC Inspection Report 50-346/98014(DRP)

This inspection included aspects of licensee operations, maintenance, engineering, and plant support. The report covers a six-week period of resident inspection.

Operations

- The licensee met the Technical Specification (TS) requirement to conduct Company Nuclear Review Board (CNRB) meetings twice per calendar year. The CNRB members were thoroughly prepared for the September 1998 meeting, discussed recent plant issues, and provided an independent assessment and recommendations on the resolution of the items discussed. The inspectors concluded that the CNRB was effectively used to provide an independent review and audit of designated activities (Section O6.1).
- During preparations for the online emergency diesel generator (EDG) #1 maintenance outage, an operator identified that removing EDG #1 from service would render both boric acid addition tank pumps inoperable. The inspectors concluded that while the work support center missed this fact, the operator exhibited a good questioning attitude and prevented the licensee from unnecessarily entering a TS-required shutdown limiting condition for operation (Section M1.2).

Maintenance

- Online safety equipment outages were performed well and in accordance with procedures. An increase in the CCW system outage scope was handled well and safety-related equipment was returned to service well within the allowed outage time (Sections M1.2, M1.3, and M1.4).
- The inspectors concluded that, by not using a foreign material exclusion boundary around the open EDG lube oil system during the online outage, the licensee was vulnerable to foreign material entering the system which could eventually effect EDG operability (Section M1.2).

Engineering

- The inspectors concluded that a human error, while calculating thermal performance data for CCW Heat Exchanger #2 and not actual heat exchanger degradation, resulted in the apparent failure of the thermal performance test (Section E1.1).
- The inspectors observed the management review committee appropriately categorize and assign Potential Condition Adverse to Quality Reports (PCAQRs) and the PCAQR review board appropriately assess proposed corrective actions. The station review board effectively reviewed Priority 1 and Priority 2 PCAQRs and a revision to the Offsite Dose Calculation Manual. The licensee satisfied TS 6.5.1 requirements for the station review board (Section E6.1).

Report Details

Summary of Plant Status

The plant was operated at approximately 100 percent power throughout the inspection period.

I. Operations

O1 Conduct of Operations

O1.1 General Comments (71707)

Operator shift turnovers were thorough, and the conduct of operations was conservative. No significant equipment or operational challenges were presented to the operators during the inspection period. Operators continued to identify, document, and appropriately prioritize equipment deficiencies as required by the corrective action program. No noteworthy operator errors occurred during the inspection period.

O2 Operational Status of Facilities and Equipment

O2.1 System Walkdowns (71707)

The inspectors walked down the accessible portions of the following engineered safety features and important-to-safety systems during the inspection period:

- Auxiliary Feedwater System
- Low Voltage Switchgear
- Emergency Ventilation System (EVS)
- Emergency Diesel Generators (EDGs)
- Component Cooling Water (CCW) System

No substantive concerns were noted during the walkdowns. Oil leaks were minor and were identified with deficiency tags. Equipment valves and ventilation dampers were positioned in accordance with applicable procedures and drawings. Essential rectifiers and invertors were operating within design parameters. Circuit breakers and protective relays were in the correct configuration. The inspectors determined that engineered-safety-systems that were walked down were configured per the Updated Safety Analysis Report (USAR).

O3 Operations Procedures and Documentation

O3.1 Current Revisions on Alternate Shutdown Room and EDG Operations Procedures

The inspectors verified that the current revisions of emergency operating procedures and EDG operating procedures were located in the alternate shutdown panel room and in the EDG rooms, respectively. The inspectors identified minor discrepancies in the emergency telephone directory which were promptly corrected.

O4 Operator Knowledge and Performance

O4.1 Equipment Operator Questioning Attitude (71707)

An equipment operator determined that when he opened a manually operated service water throttle valve for CCW Heat Exchanger #1, he was able to be open it to about 80 percent instead of 30-35 percent that was indicated on a label plate attached to the valve. The operator initiated a Potential Condition Adverse to Quality Report (PQACR) to document this apparent equipment deficiency. A subsequent review of the issue revealed that the valve stop was set properly; however, the label plate attached to the valve contained inaccurate information which was subsequently corrected. The equipment operator effectively used the corrective action program to report and resolve an unexpected equipment condition rather than accepting the condition as found.

O6 Operations Organization and Administration

Company Nuclear Review Board (CNRB) Meeting (71707)

On September 13, 1998, the inspectors attended the licensee's second CNRB meeting of the year which fulfilled the TS requirement to hold such meetings. The CNRB members were thoroughly prepared for the meeting. Use of the new M-5 fuel design and a brief overview of Refueling Outage 11 were discussed while the inspectors were present. The CNRB members provided an independent assessment and recommendations on addressing these and other recent plant issues. The inspectors concluded that the CNRB was effectively used to provide an independent review and audit of designated activities.

O8 Miscellaneous Operations Issues (92700)

O8.1 (Closed) Unresolved Item 50-346/96010-01 (DRP): Control of Temporary Deviations From Normal System Lineups. This item pertained to operations personnel making temporary deviations from normal lineups without conducting safety reviews for up to six months. Procedure DB-OP-00016 required that safety reviews be completed when deviations from normal lineups exceeded six months. The inspectors reviewed selected temporary deviations from normal system lineups and determined that no unreviewed safety questions existed concerning these situations. The inspectors noted that a checklist existed which was used and should identify if a safety evaluation would be needed for these temporary deviations.

O8.2 (Closed) Licensee Event Report 50-346/97-001-00 and 01: Power Range Nuclear Instrument for Reactor Power Imbalance Indicating an Unexpected Value. The licensee identified that a degraded instrument was indicating erroneous values. The licensee also determined that the undetected degraded instrument was in a degraded condition 18 minutes longer than allowed by TSs. An evaluation of the consequences and safety significance of exceeding the allowed time was determined to be minor. The licensee repaired the instrument and included the lessons learned from this event into the licensed operator training. The inspectors determined that the corrective actions were

appropriate. This failure constitutes a violation of the TSs with minor significance and is not subject to formal enforcement action.

II. Maintenance

M1 Conduct of Maintenance

M1.1 Maintenance and Surveillance Activities (61725)(62707)

The following maintenance and surveillance testing activities were observed/reviewed during the inspection period:

- DB-SP-3151 Auxiliary Feedwater Pump #1 Quarterly Surveillance
- EDG #1 Outage
- CCW #2 Outage

During the Auxiliary Feedwater Pump test, equipment operated as specified in the USAR. Test acceptance criteria was in accordance with the station pump and valve basis documentation, which was consistent with USAR requirements and TS requirements. Noteworthy observations during the outages are listed below.

M1.2 EDG #1 Online Maintenance Outage

a. Scope (62707)

The inspectors reviewed the following activities during the online EDG #1 outage:

- Clearance 98-1182, "EDG Fuel Oil Clearance"
- Clearance 98-1157, "EDG Clearance"
- EDG Maintenance Deficiency Tags
- MWO 2-97-0087-01, "EDG #1 Installation of Speed Circuit"
- MWO 3-98-0727, "Clean and Inspect EDG"
- Modification 97-0087, "Replace EDG 1 Tachometer Circuit for Appendix R Protection"
- Vendor Technical Manual M-180-92-3, "Morrison Knudsen Company EDG"
- Procedure DB-MM-09320, "Emergency and Station Blackout Diesel Engine Maintenance"
- PCAQRs associated with EDG #1 and EDG #2

b. Observations and Findings

Work support center personnel released maintenance work orders to plant operators on August 17 to begin the tagout for the EDG #1 online outage. While reviewing the control panels for the tagout, an alert operator remembered that Boric Acid Addition Tank (BAAT) Pump #2 was inoperable because of repetitive air binding. EDG #1 is the emergency power source for BAAT Pump #1. With BAAT Pump #2 inoperable, no BAAT pumps would have had an emergency power source had EDG #1 been removed

from service for maintenance. This would have required an entry into a shutdown limiting condition for operation (LCO) per TS 3.0.5. The operator was sensitive to this because of a similar issue, documented in Inspection Report 50-346/98013, involving an inoperable emergency power source for Control Room Emergency Ventilation System (CREVS) #1 during CREVS #2 maintenance. The corrective actions for the CREVS issue had not been fully implemented but operations management heightened operator awareness to this condition. The licensee appropriately resolved the issues for BAAT Pump #2 and the EDG maintenance was started.

The inspectors attended the EDG maintenance pre-job brief on August 12 and noted that electrical, engineering, maintenance, quality assurance, safety, and operations personnel were represented. Discussions during this meeting focused on the scope of the outage, resolving potential issues for pre-staging the work activities, and the delegation of organizational responsibilities.

Between August 19 and 20, the inspectors observed the outage activities. Plant personnel followed appropriate procedures, stopped work when a discrepancy was encountered and initiated PCAQRs as expected to document encountered problems. The inspectors observed that a foreign material exclusion (FME) boundary was not established around the open lube oil system. No foreign material was observed to have entered the system while the inspectors were present. Plant management stated that the use of FME zones would be evaluated for future EDG maintenance activities. The inspectors noted that the clearances were fully implemented, outstanding PCAQRs were resolved before the outage, material deficiency tags were dispositioned appropriately and that the modification process for implementing the tachometer circuit was followed. Further, the inspectors compared the vendor technical manual requirements for periodic maintenance with Procedure DB-MM-09320 and determined that the procedure included the vendor's recommendations. The work was performed through two 12-hour shifts and the EDG maintenance was completed within the allowed outage time. Two system engineers provided full coverage and contributed to the success of the outage by providing clarifying procedural information to craft workers and capturing lessons learned.

The inspectors attended the post job critique on August 24 and noted that each organization contributed comments to improve the work activities for the outage. These comments were added to the post critique report for improvements in future mini-outages.

M1.3 CCW System Online Maintenance Outage

a. Scope (62707)

The inspectors reviewed the following:

- MWO 3-98-0191-01, "Clean, lubricate, and Inspect CCW Pump #2 and Motor"
- MWO 3-98-0077-01, "Clean and Inspect CCW Heat Exchanger #2"
- Clearance 98-1179, CCW Heat exchanger #2
- Clearance 98-1180, CCW Ventilation

b. Observations and Findings

The CCW system online maintenance outage included routine preventive maintenance on the pump motor, associated breakers and actuators on the CCW ventilation system. On September 1, the inspectors walked down the CCW system and verified the clearances were appropriately implemented, the maintenance craft followed procedures and that both engineering management and system engineers were present to ensure work activities progressed smoothly and provide input to any encountered problems.

During the outage, the scope was changed to add the inspection and cleaning of the heat exchanger because of a thermal performance test failure (See Section E1.1). Work resources were appropriately shifted, the service water side of the heat exchanger was opened and cleaned, and the tubes were inspected and cleaned. Health physics personnel appropriately surveyed the debris from inside the heat exchanger. Maintenance Work Order (MWO) 3-98-0077-01 was followed for the cleaning and inspection. Although the scope of the outage was increased, the maintenance activity was completed within the allowed outage time. The inspectors verified that the system was properly restored.

M1.4 Conclusions on the Conduct of Online EDG and CCW System Outages

During preparations for the online EDG #1 maintenance outage, an operator identified that removing EDG #1 from service would render both BAAT pumps inoperable. The inspectors concluded that while the work support center missed this fact, the operator exhibited a good questioning attitude and prevented the licensee from unnecessarily entering a TS-required shutdown LCO.

Online safety equipment outages were performed well and according to procedures. An increase in the CCW system outage scope was handled well and safety-related equipment was returned to service well within the allowed outage time.

The inspectors concluded that, by not using an FME boundary around the open EDG lube oil system during the online outage, the licensee was vulnerable to foreign material entering the system which could eventually effect EDG operability.

M1.5 Body to Bonnet Nuts Missing on Pressurizer Spray Isolation Valve RC 2 (62707)

The licensee identified a packing leak on valve RC 2 during plant restart following the refueling outage in May 1998. Periodic visual inspection of the packing leak was conducted while the plant was at 100 percent power. On September 1, the licensee identified that one of eight bonnet nuts on the valve was missing. The licensee determined that the valve remained operable with seven of the eight nuts installed. On September 9, during a containment entry to install the missing nut, the licensee identified that a second nut was missing. A stainless steel nut was installed for the original missing nut and the remaining six nuts were torque checked. On September 10, a stainless steel nut was installed for the second missing nut, and the other nuts and studs were verified to be made of stainless steel. Additionally, RC 2 was given a furmanite injection, which stopped the packing leak. Subsequently, during evaluation, engineering personnel determined that RC 2 would not have functioned during design

basis seismic conditions with only six nuts installed and reported this condition pursuant to 10 CFR 50.72.

During its investigation, the licensee initially concentrated on the possibility that the nuts were not reinstalled upon completion of the valve yoke replacement during the last refueling outage. Following interviews with the maintenance craft who had performed the work, the licensee preliminarily determined that this root cause was not credible because of the good work histories of the personnel involved and the maintenance processes that were performed. Consequently, the licensee was investigating the possibility that the two missing nuts had been made of carbon steel and had corroded away due to corrosive hot boric acid from the packing leak collecting to the nuts. The licensee was continuing the investigation to determine if this theory could be substantiated. Stainless steel nuts and studs, currently installed on RC 2, are not susceptible to boric acid corrosion and pose no current operability concern. Because the licensee and inspectors had not completed their investigation of the matter, this is an Inspection Followup Item (IFI 50-346/98014-01).

M8 Miscellaneous Maintenance Issues (92902)

- M8.1 (Closed) Licensee Event Report 50-346/96-009-01: EDG Inoperable While Synchronized to the Grid. The licensee identified on November 13, 1996, that conditions existed that could render the EDG inoperable. Engineering personnel evaluated EDG operations and identified that when the EDG was synchronized to the grid during surveillance testing, emergency start signals would place the governor and excitation system in overload conditions. Although the USAR implied that synchronizing to the electrical grid during testing rendered the EDG inoperable, the surveillance procedure improperly did not require the operators to declare the EDG inoperable. The licensee had evaluated past surveillance tests and determined that no adverse consequences existed because of this condition. As corrective action, the licensee changed the surveillance test procedure to require declaring the EDG inoperable during synchronization. This failure constitutes a violation of minor significance and is not subject to formal enforcement action.
- M8.2 (Closed) Licensee Event Report 50-346/97-002-00 and 01: The licensee identified that the design of six containment penetrations may not have been adequately considered for all possible accident conditions. Three of the penetrations were isolated and tested. The testing determined that the penetrations were adequately designed. Modifications were implemented to ensure adequate allowable pipe stress values for the three remaining penetrations. The inspectors verified that all six penetrations passed the subsequent containment pressurization test. The corrective actions were appropriate.
- M8.3 (Closed) Inspection Follow up Item 50-346/97013-01 (DRP): Oversight Verification that Surveillance Test Data Satisfied TS Acceptance Criteria. The inspectors identified that raw data was not recorded for completed tests to allow supervisory personnel review of the results against the acceptance criteria. Although no violation of procedures occurred, several changes were made to enhance test data recording practices. First, the procedure writers' guidelines were changed to clarify recording of raw data in completed tests. This expectation was reinforced to station personnel through a

memorandum from the plant manager. Second, the definitions of the words "verify" and "confirm" were revised so that supervisory personnel and procedure writers more clearly understood the expectations for test review. Finally, surveillance Procedure DB-OP-03006, "Miscellaneous Instrument Shift Check," was to be revised so that data recording practices conformed with the new guidance of the procedure writers' guidelines.

- M8.4 (Closed) Inspection Follow up Item 50-346/97008-03 (DRP): Rainwater Intrusion Into Equipment Spaces. The inspectors observed rainwater intruding through EDG room outer doors, dripping on an emergency battery light in the service water tunnel, and being drawn into the cooling air flow for Service Water Pump #3 motor via the ventilation system. Additionally, in the EDG room, a lip around a drain caused about 10 gallons of water to back up into the room. Although no violations of NRC requirements occurred, the licensee took actions to prevent future intrusions of rainwater into these spaces. No other areas susceptible to rainwater intrusion had been noted by the inspectors and no further review of this issue is necessary.
- M8.5 (Closed) Violation 50-346/96014-01: Lack of Administrative Rigor During Surveillance Testing. This violation pertained to performing surveillance procedure steps out of sequence and not logging that a Containment Air Cooler was inoperable during testing. In response to performing test procedure steps out of sequence, the licensee implemented procedure NG-DB-00225, "Procedure Use and Adherence," to clarify consistent expectations for procedure usage. Additionally, surveillance procedure administrative requirements were made consistent and training was provided to station personnel concerning the sequencing of steps. For not recognizing that the Containment Air Cooler was inoperable during testing, operations personnel generated procedure change requests for testing procedures clarifying the inoperable equipment during testing. The inspectors determined that these corrective actions were acceptable.

III. Engineering

E1 Conduct of Engineering

E1.1 Erroneous Transposition of CCW Heat Exchanger #2 Temperature Data

a. Scope (37551)

The inspectors followed up on the failure of the thermal performance test of CCW heat exchanger.

b. Observations and Findings

The licensee used a new computer program to calculate the thermal performance of CCW Heat Exchanger #2. The intent of the thermal performance test results was to provide an effective criteria for removing the heat exchanger from service for cleaning. While calculating heat exchanger thermal performance, the test engineer erroneously input CCW temperature data as SW temperature and vice versa. The error made it

appear that the heat exchanger had failed the test. After evaluation of the test results, the licensee opened, inspected and cleaned the heat exchanger (See Section M1.3). During this activity, the licensee found very little mud, silt, clams, nodule coverage and tube fouling. The test engineer reviewed the data that he input in the program and discovered his error. The inspectors determined that inattention-to-detail caused the error that ultimately led to unnecessary cleaning of the heat exchanger.

c. Conclusions

The inspectors concluded that a human error while calculating thermal performance data for CCW Heat Exchanger #2, and not actual heat exchanger degradation, resulted in the apparent failure of the thermal performance test.

E6 Engineering Organization and Administration

E6.1 Performance of Station Review Board, Management Review Committee and the PCAQR Review Board (71707)

The inspectors observed the management review committee appropriately categorize and assign PCAQRs and the PCAQR review board appropriately assess proposed corrective actions. The station review board effectively reviewed Priority 1 PCAQRs 98-1301 (tornado impact on telecommunications), and -1334 (resin intrusion in the feedwater system), and Priority 2 PCAQR 98-1289 (Appendix R concern on Containment Air Cooler #1), LER 98-008, Revision 2, (loss of qualified offsite power source during tornado) and a revision to the Offsite Dose Calculation Manual. The licensee satisfied TS 6.5.1 requirements for the station review board.

E8 Miscellaneous Engineering Issues (92903)

E8.1 (Closed) Licensee Event Report 50-346/97-003-00 and 01: Non-conservative Parameters for Departure from Nucleate Boiling Parameters. On January 30, 1997, Framatome Cogema Fuels notified the station that the TS action statement for departure from nucleate boiling parameters was non-conservative for degraded reactor coolant flow conditions. The cause of the non-conservative values was an error in the calculations for supporting the TS amendment. Administrative guidance was promptly provided to ensure that the station was put into safe conditions if degraded flow conditions were encountered. The error in TS was corrected and the appropriate amendment was issued. The inspectors reviewed historical plant parameters and determined that during the period that the error in the calculation was made and until the TS was corrected, the plant did not reach degraded flow conditions. Based on this, the inspector determined that no adverse consequences existed and that the safety significance was minimal.

E8.2 (Closed) Inspection Follow up Item 50-346/96006-06 (DRP): Engineering Unfamiliarity with Generic Letter (GL) 91-18 Guidance. During the inspectors' review of the engineering evaluation for the containment air cooler water hammer issue at Haddam Neck, the inspectors noted that some engineers were unfamiliar with GL 91-18 guidance for conducting operability determinations and for resolution of degraded and

nonconforming conditions. In response to this weakness, the licensee conducted training to plant engineering and engineering support personnel on GL 91-18 guidance. Additionally, operations personnel were provided required reading on the subject in February 1997. The inspectors concluded the licensee adequately addressed the issue.

- E8.3 (Closed) Inspection Followup Item 50-346/96010-05 (DRP): Inconsistent Control Room Humidity Limits. The inspectors identified inconsistent USAR table lower humidity limits for control room equipment. Table 7.3-4, "SFAS (Safety Features Actuation System) Operating Requirements," described that SFAS equipment in the control room had an allowable range for abnormal conditions of 40-80 percent relative humidity while Table 7.2-3, "Environmental Conditions for Instrumentation and Controls," listed the normal operating range to be 20-60 percent relative humidity. The licensee determined, through a review the licensing basis documentation, that no lower humidity limits actually existed for control room equipment and that the table description had always been in error. Therefore, the licensee generated a USAR change notice to change Table 7.3-4 from reading 40 to 80 percent relative humidity to up to 80 percent relative humidity. As this was determined to be a minor administrative error in the level of detail of the USAR that had no impact on plant operations, no violation was identified.
- E8.4 (Closed) URI 50-346/97004-03(DRP): Shield Building Blowout Panel Installation. The blowout panels are designed to release during postulated main feedwater line breaks outside containment to protect the containment vessel from buckling from a high external pressure. However, during a Loss of Coolant Accident (LOCA), the heat generation from the LOCA and heat transfer across the containment vessel would heat the air and subsequently increase air pressure in the shield building negative pressure boundary. If this pressure increase was high enough to cause a blowout panel to release, the Emergency Ventilation System (EVS) would be incapable of maintaining a negative pressure in the shield building. The inspectors were concerned with the apparently low margin between blowout panel setpoints and the theoretical pressure that would be observed on the blowout panels from a postulated LOCA.

The inspectors reviewed calculation assumptions for shield building pressures following a LOCA and the explosive release bolt calculations for the blowout panels and determined the assumptions and calculations to be conservative. The inspectors determined that the blowout panels would function as designed without affecting the EVS design function. However, the inspectors reviewed installation instructions in drawings and procedures and determined that they contained minimal information. Subsequently, installation instructions were improved by including more detail on the drawings and in the procedures.

Another concern was that the blowout panels were caulked, which was not per the installation drawings, which could affect the blowout panel release pressure. After a review, the licensee determined that the caulking did not affect the setpoint of the blowout panels, however, the licensee scored all of the caulking to eliminate any bias to the setpoint. Also, several explosive release bolts did not have washers installed per the

installation drawings. Maintenance craft inspected all of the bolts and installed washers as necessary. Although problems were noted, none of the configuration issues were determined to cause the blowout panels to be inoperable. This failure constitutes a violation of minor significance and is not subject to formal enforcement action.

- E8.5 (Closed) URI 50-346/97011-01(DRP): CCW Ventilation System Found Inoperable on Two Occasions. This involved the inspectors' discovery, on August 30, 1997, that CCW ventilation train 1 temperature controller was erroneously set at 100 percent output, thereby maximizing recirculation flow but securing exhaust flow. Subsequently, on September 19, 1997, the inspectors discovered that CCW Ventilation Recirculation Damper HV 5444B was discovered open when it should have been closed. Consequently, during further investigation, the licensee discovered CCW Ventilation Exhaust Damper HV 5444A in the mid position instead of fully open. PCAQRs 97-1164 (temperature controller), -1244 (HV 5444A) and -1250 (HV 5444B) were written documenting the conditions. The inspectors were concerned that both trains of CCW ventilation systems may have been inoperable simultaneously.

The licensee was unable to determine who erroneously set the temperature controller and as to when this condition occurred. However, the licensee attributed the condition to human error and to confusing label plate (affixed near the controller) instructions for properly setting the controller. Corrective action to prevent recurrence included clarifying the label plate instructions and providing training to the operators on properly setting the temperature controller. The inspectors determined these corrective actions were acceptable.

Likewise, the licensee was unable to determine when the dampers on Train 2 were mispositioned. However, the licensee determined that a setscrew on the damper arm linkage was not aligned properly with a dimple on the shaft and allowed the shaft to rotate without repositioning the dampers. The operability evaluation for PCAQRs 97-1244 and -1250 determined that, based on the high fan capacity and the damper flow characteristics, the CCW ventilation system would have fulfilled its design function with mispositioned dampers and therefore, remained operable. The licensee took immediate corrective actions including aligning the setscrew with the dimple, tightening the screw and securing the screw with Loctite. Corrective action to prevent recurrence included revising Preventive Maintenance (PM) 2496, an annual PM implemented to check setscrew tightness, to include an instruction to align the setscrew with the dimple.

IV. Plant Support

R1 Radiological Protection and Chemistry (RP&C) Controls

R1.1 Radiation Protection Postings (71750)

The inspectors verified that radiation, high radiation and contamination areas were appropriately posted and that the posted dose rates were consistent with those determined by the inspectors. The inspectors also noted Radiation Protection personnel

in the field performing a weekly surveillance to verify that postings, signs and barriers were properly established. The inspectors concluded that the licensee was effectively posting contamination and radiation areas.

V. Management Meetings

X1 Exit Meeting Summary

The inspectors presented the inspection results to members of licensee management at the conclusion of the inspection on September 18, 1998. The licensee acknowledged the findings presented. The inspectors asked the licensee whether any materials examined during this inspection should be considered proprietary. No proprietary information was identified.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

J. Wood, Vice President
J. Lash, Plant Manager
R. Donnellon, Director, Engineering and Services
L. W. Worley, Director, Nuclear Assurance
J. Rogers, Manager, Plant Engineering
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NRC

S. J. Campbell, Senior Resident Inspector, Davis-Besse
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INSPECTION PROCEDURES USED

IP 37551: Onsite Engineering
IP 61726: Surveillance Observations
IP 62707: Maintenance Observation
IP 71707: Plant Operations
IP 71750: Plant Support Activities
IP 90712: In-Office Review of Written Reports of Nonroutine Events at Power Reactor Facilities
IP 92700: Onsite Follow-up of Written Reports of Nonroutine Events at Power Reactor Facilities
IP 92901: Followup - Plant Operations
IP 92902: Followup - Maintenance
IP 92903: Followup - Engineering

ITEMS OPENED AND CLOSED

Opened

IFI 50-346/98014-01(DRP) Missing Bonnet Nuts on Pressurizer Spray Isolation Valve

Closed

URI 50-346/96010-01(DRP) Control of Temporary Deviations from Normal System Lineups
LER 50-346/97001-00 and -01(DRP) Unexpected Values on Power Range Nuclear Instrument for Reactor Power Imbalance
LER 50-346/96009-01(DRP) EDG Inoperable While Synchronized to the Grid During Testing
LER 50-346/97002-00 and -01(DRP) Inadequate Design Considerations of Containment Penetrations
IFI 50-346/97013-01(DRP) Oversight Verification that Surveillance Test Data Satisfied Acceptance Criteria
IFI 50-346/97008-03(DRP) Rainwater Intrusion Into Equipment Spaces
VIO 50-346/96014-01(DRP) Lack of Administrative Rigor During Surveillance Testing
IFI 50-346/96006-06(DRP) Engineering Unfamiliarity With GL 91-18 Guidance
IFI 50-346/96010-05(DRP) Inconsistent Control Room Humidity Limits
URI 50-346/97004-03(DRP) Shield Building Blowout Panel Installation
URI 50-346/97011-01(DRP) Inoperable CCW Ventilation System

LIST OF ACRONYMS AND INITIALISMS USED

BAAT	Boric Acid Addition
CCW	Component Cooling Water
CFR	Code of Federal Regulations
CNRB	Company Nuclear Review Board
CREVS	Control Room Emergency Ventilation System
EDG	Emergency Diesel Generator
EVS	Emergency Ventilation System
GL	Generic Letter
IFI	Inspection Followup Item
IR	Inspection Report
LOCA	Loss of Coolant Accident
MWO	Maintenance Work Order
NRC	Nuclear Regulatory Commission
PCAQR	Potential Condition Adverse to Quality Report
PDR	Public Document Room
PM	Preventive Maintenance
SFAS	Safety Features Actuation System
TS	Technical Specification
USAR	Updated Safety Analysis Report
URI	Unresolved Item